Amendments to the Claims

Please cancel claims 155-187 without prejudice.

The following listing of claims will replace all prior versions and/or listings of claims in the application:

Listing of Claims:

1-120. (cancelled)

121. (previously presented): A method for treating a hydrocarbon containing formation, comprising:

providing heat from one or more heaters to at least a portion of the formation, wherein at least one of the heaters is in at least one wellbore in the formation, and wherein at least one of the wellbores has been sized, at least in part, based on a determination of expansion of the formation caused by heating of the formation such that expansion of the formation caused by heating of the formation is not sufficient to cause substantial deformation of one or more heaters in such sized wellbores, and wherein a ratio of an outside diameter of the heater to an inside diameter of the wellbore is less than about 0.75; and

allowing the heat to transfer from the one or more heaters to a part of the formation; and producing a mixture from the formation.

122. (original): The method of claim 121, wherein at least one of the wellbores comprises an open wellbore.

123. (original): The method of claim 121, wherein the ratio of the outside diameter of the heater to the inside diameter of the wellbore is less than about 0.5.

124. (original): The method of claim 121, wherein the ratio of the outside diameter of the heater to the inside diameter of the wellbore is less than about 0.3.

125. (original): The method of claim 121, further comprising controlling the heating to maintain a minimum space between at least one of the heaters and the formation in at least one of the wellbores.

126. (original): The method of claim 121, further comprising controlling the heating using a temperature limited heater.

127. (original): The method of claim 121, further comprising controlling the heating to maintain a minimum space of at least about 0.25 cm between at least one of the heaters and the formation in at least one wellbore.

128. (original): The method of claim 121, wherein a diameter of one or more of the sized wellbores is greater than or equal to about 30 cm.

129. (original): The method of claim 121, wherein one or more of the wellbores have an expanded diameter proximate to relatively rich zones in the formation.

130. (original): The method of claim 129, wherein one or more of the expanded diameters is greater than or equal to about 30 cm.

131. (original): The method of claim 129, wherein the relatively rich zones comprise a richness greater than about 0.15 L/kg.

132. (original): The method of claim 129, wherein the relatively rich zones comprise a richness greater than about 0.17 L/kg.

133. (original): The method of claim 121, further comprising adjusting a heat output of at least one of the heaters such that the heat output provided to relatively rich zones of the formation is less than the heat output provided to other zones of the formation.

134. (original): The method of claim 133, wherein the relatively rich zones comprise a richness greater than about 0.15 L/kg.

135. (original): The method of claim 121, further comprising adjusting a heat output of at least one of the heaters such that the heat output provided to relatively rich zones of the formation is less than about ½ the heat output provided to other zones of the formation.

136. (original): The method of claim 121, further comprising reaming at least one of the wellbores after at least some heating of the formation from such wellbores.

137. (original): The method of claim 121, further comprising reaming at least one of the wellbores after at least some heating of the formation from such wellbores, and wherein the reaming is conducted to remove at least some hydrocarbon material that has expanded in such wellbores.

138. (original): The method of claim 121, further comprising removing at least one of the heaters from at least one of the wellbores, and then reaming at least one such wellbore.

139. (original): The method of claim 121, further comprising perforating one or more relatively rich zones in at least part of the formation to allow for expansion of at least one or more of the relatively rich zones during heating of the formation.

140. (original): The method of claim 121, further comprising placing a liner in at least one of the wellbores, between at least a part of one of the heaters and the formation, wherein the liner inhibits heater deformation caused by thermal expansion of the formation during heating.

141. (original): The method of claim 140, wherein the liner comprises a mechanical strength sufficient to inhibit collapsing of the liner proximate relatively rich zones of the formation.

142. (original): The method of claim 140, wherein the liner comprises one or more openings to allow fluids to flow through the wellbore in which the liner is placed.

143. (original): The method of claim 140, wherein a ratio of an outside diameter of the liner to the inside diameter of the wellbore in which the liner is placed is less than about 0.75.

144. (original): The method of claim 140, wherein a ratio of an outside diameter of the liner to the inside diameter of the wellbore in which the liner is placed is less than about 0.5.

145. (original): The method of claim 140, wherein a ratio of an outside diameter of the liner to the inside diameter of the wellbore in which the liner is placed is less than about 0.3.

146. (original): The method of claim 121, further comprising maintaining a temperature in at least a portion of the formation in a pyrolysis temperature range, with a lower pyrolysis temperature of about 250 °C and an upper pyrolysis temperature of about 400 °C.

147. (original): The method of claim 121, further comprising heating at least a part of the formation to substantially pyrolyze at least some hydrocarbons in the formation.

148. (original): The method of claim 121, further comprising controlling a pressure and a temperature in at least a part of the formation, wherein the pressure is controlled as a function of temperature, or the temperature is controlled as a function of pressure.

149. (currently amended): The method of claim 121, wherein allowing the heat to transfer from the one or more heaters to the part of the formation comprises transferring heat substantially by ~~conduction~~radiation.

150. (original): The method of claim 121, wherein the produced mixture comprises condensable hydrocarbons having an API gravity of at least about 25°.

151. (original): The method of claim 121, further comprising controlling a pressure in at least a majority of a part of the formation, wherein the controlled pressure is at least about 2.0 bars absolute.

152. (original): The method of claim 121, further comprising controlling formation conditions such that the produced mixture comprises a partial pressure of H_2 in the mixture greater than about 0.5 bars.

153. (original): The method of claim 121, wherein the formation comprises an oil shale formation.

154. (original): The method of claim 121, wherein the formation comprises a coal formation.

155-187. (cancelled)

188. (original): A system configured to heat at least a part of a hydrocarbon containing formation, comprising:

an elongated heater located in an opening in the formation, wherein at least a portion of the formation has a richness of at least about 30 gallons of hydrocarbons per ton of formation, as measured by Fischer Assay, and wherein the heater is configured to provide heat to at least a part of the formation during use such that at least a part of the formation is heated to at least about 250 °C; and

wherein an initial diameter of the opening is at least 1.5 times the largest transverse cross-sectional dimension of the heater in the opening and proximate the part of the formation being heated such that it inhibits the formation from deforming the heater due to expansion of the formation caused by heating of the formation.

189. (original): The system of claim 188, wherein the initial diameter of the opening is at least about 2 times the largest transverse cross-sectional dimension of the heater in the opening.

190. (original): The system of claim 188, wherein the initial diameter of the opening is sufficiently large enough to inhibit the formation from deforming the heater during heating of the formation.

191. (original): The system of claim 188, wherein the initial diameter of the opening is sufficiently large enough to inhibit the formation from seizing the heater during heating of the formation.

192. (original): The system of claim 188, wherein the initial diameter of the opening is sufficiently large enough to inhibit the formation from damaging the heater during heating of the formation.

193. (original): The system of claim 188, wherein the initial diameter of the opening is sufficiently large enough to inhibit the formation from compressing the heater during heating of the formation.

194. (original): The system of claim 188, wherein the initial diameter of the opening is at least 3 times the largest transverse cross-sectional dimension of the heater in the opening.

195. (original): The system of claim 188, wherein the initial diameter of the opening is at least 4 times the largest transverse cross-sectional dimension of the heater in the opening.

196. (original): The system of claim 188, wherein the system is configured to pyrolyze at least some hydrocarbons in the formation during use.

197. (original): The system of claim 188, wherein the initial diameter of the opening is approximately a size of a drillbit used to form the opening.

198. (original): The system of claim 188, wherein the heater comprises a ferromagnetic material.

199. (original): The system of claim 188, wherein the heater comprises a temperature limited heater.

200. (original): The system of claim 188, wherein the opening comprises an uncased wellbore.

201. (original): The system of claim 188, wherein the heater is located in at least a portion of a deformation resistant container.

202. (original): The system of claim 201, wherein the initial diameter of the opening is sufficiently large enough to inhibit the formation from deforming the deformation resistant container during heating of the formation.

203. (original): The system of claim 188, wherein the initial diameter of the opening is at least 2 times the largest transverse cross-sectional dimension of the heater in the opening and proximate a part of the formation that comprises a richness of at least about 0.12 L/kg.

204. (original): The system of claim 188, wherein the formation comprises an oil shale formation.

205. (original): The system of claim 188, wherein the formation comprises a coal formation.

206-1690. (cancelled)